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WATER SUPPLY OUTLOOK FOR ARIZONA



U.S. DEPT. OF AGRICULTURE
FEB. 23 1976
PROF. SCOTT L. CHAPMAN

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with
**SALT RIVER VALLEY WATER USERS ASSOCIATION
and
ARIZONA WATER COMMISSION**

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
FEB. 15, 1976

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SURVEYOR ENROUTE TO THE MT. BALDY ARIZONA SNOW COURSE
SCS PHOTO AZ-5460

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR ARIZONA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

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ADMINISTRATOR
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WASHINGTON, D C

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SALT RIVER VALLEY WATER
USERS ASSOCIATION

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Report prepared by

RICHARD W. ENZ, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
ROOM 6029 FEDERAL BUILDING
PHOENIX, ARIZONA 85025



Precipitation gage at Baker Butte
ARIZONA SUMMARY
as of
FEBRUARY 15, 1976

EXTREMELY HEAVY STORMS IN EARLY FEBRUARY HAVE GREATLY IMPROVED THE ARIZONA WATER SUPPLY OUTLOOK. RESERVOIR STORAGE INCREASED SIGNIFICANTLY AND STREAMFLOW FORECASTS HAVE ALL BEEN RAISED. THE GREATEST IMPROVEMENT OCCURRED ON THE BILL WILLIAMS, VERDE, AND THE TONTO WATERSHEDS AND THE LEAST IMPROVEMENT WAS ON THE GILA AND LITTLE COLORADO.

SNOW COVER

Warm temperatures accompanied by rain have reduced the snow cover at the lower elevations. Where there was little or no rain, however, snow cover increased significantly. The greatest increase in snow pack occurred at Baker Butte #2 and Snow Bowl #2 where 9 and 10" of increased water content was measured.

Snow cover now varies from 75% of average on the Gila Watershed to 156% on the Verde, with near normal amounts elsewhere.

PRECIPITATION

Precipitation amounts the first half of February set all-time records at several locations. Some of the heaviest amounts received were at Crown King with 11.47; Baker Butte, 10.04; Camp Wood, 9.84; Canyon Point, 7.58; Mormon Mountain, 7.65; Payson, 6.56; Flagstaff, 5.93; and Prescott, 4.40. February precipitation on the Verde Watershed has already exceeded the three month combined normal for January, February and March.

Accumulated precipitation since November 1 is now above normal on all major watersheds except the Gila which is slightly below average.

SOIL MOISTURE

Rain and melting snow has resulted in excellent soil moisture conditions except at the very highest elevations. Additional storms in the near future will yield good runoff.

RESERVOIR STORAGE

Storage in the Salt River Project reservoirs increased by 242,000 acre-feet since February 1, raising them to 60% of capacity and above average for this date. Lake Pleasant, which was down to 18,000 acre-feet, increased its storage almost threefold. Most stock tanks and small reservoirs in northwestern and central Arizona are now full.

STREAMFLOW AND WATER SUPPLY

Streamflow has been much above average on all streams with the highest flows occurring on the Verde, Tonto, and Bill Williams Rivers. The Verde has already produced the greatest February runoff since 1941 and could exceed that if we have another heavy storm. Revised streamflow forecasts indicate much above average is expected from the Verde and Tonto, near average from the Salt, and 30% below average from the Gila.

Water supplies should be good in most areas this year except on the Gila where conditions will be fair. Stock water and range soil moisture conditions are greatly improved, especially in northwestern Arizona where it was needed the most.

STREAMFLOW FORECASTS ABOUT FEBRUARY 15, 1976

STREAMFLOW FORECASTS		ABOUT FEBRUARY 15, 1976		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT		FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET		
		Thousand Acre Feet	Percent of Average		Last Year	Average †	
<u>SALT RIVER DRAINAGE</u>							
Salt near Roosevelt		247	91	Feb-May	428.9	272.1	
"		75	158	February	24.6	47.5	
Tonto Creek near Roosevelt		98	310	Feb-May	45.2	31.6	
"		73	869	February	3.0	8.4	
Verde River above Horseshoe		300	199	Feb-May	166.9	150.4	
"		172	480	February	15.3	35.9	
Total Salt River Project Streams		645	142	Feb-May	641.0	454.1	
<u>GILA RIVER DRAINAGE</u>							
Gila River at Calva		45	54	Feb-May	73.4	83.0	
Gila River near Gila		40	84	Feb-May	71.7	47.4	
Gila River near Solomon		87	69	Feb-May	154.2	125.2	
"		36	104	February	24.3	34.7	
Gila River near Virden		46	74	Feb-May	87.2	62.5	
Frisco River at Clifton		44	69	Feb-May	74.5	63.0	
Frisco River at Glenwood		17	61	Feb-May	39.2	27.7	
<u>LITTLE COLORADO RIVER DRAINAGE</u>							
Little Colo. River above Lyman Dam		5.8	55	Feb-June	16.8	10.6	
Greer 1/		6.0	85	Feb-June	---	7.1*	
<u>GRANITE CREEK DRAINAGE</u>							
Granite Creek		5.5	--	Feb-May	---	---	
Willow Creek		3.0	--	Feb-May	---	---	
<u>MIMBRES RIVER DRAINAGE</u>							
Mimbres River near Mimbres		2.0	54	Feb-May	8.8	3.7	
<u>COLORADO RIVER DRAINAGE</u>							
Virgin River nr. Littlefield		28	65	Apr-June	22.5	43.2	
Colorado River -- Lake Powell Inflow (Issued by SCS, Utah)		5596	81	Apr-July	10,407	6881	
Lake Mary Inflow		7.0	137	Feb-May	5.8	5.1	
1/ Corrected for Filler Ditch Diversion. † Based on 15-year period, 1958-72. * Average is for less than 15 years.							

RESERVOIR STORAGE (Thousand Acre Feet) MID-MONTH READING

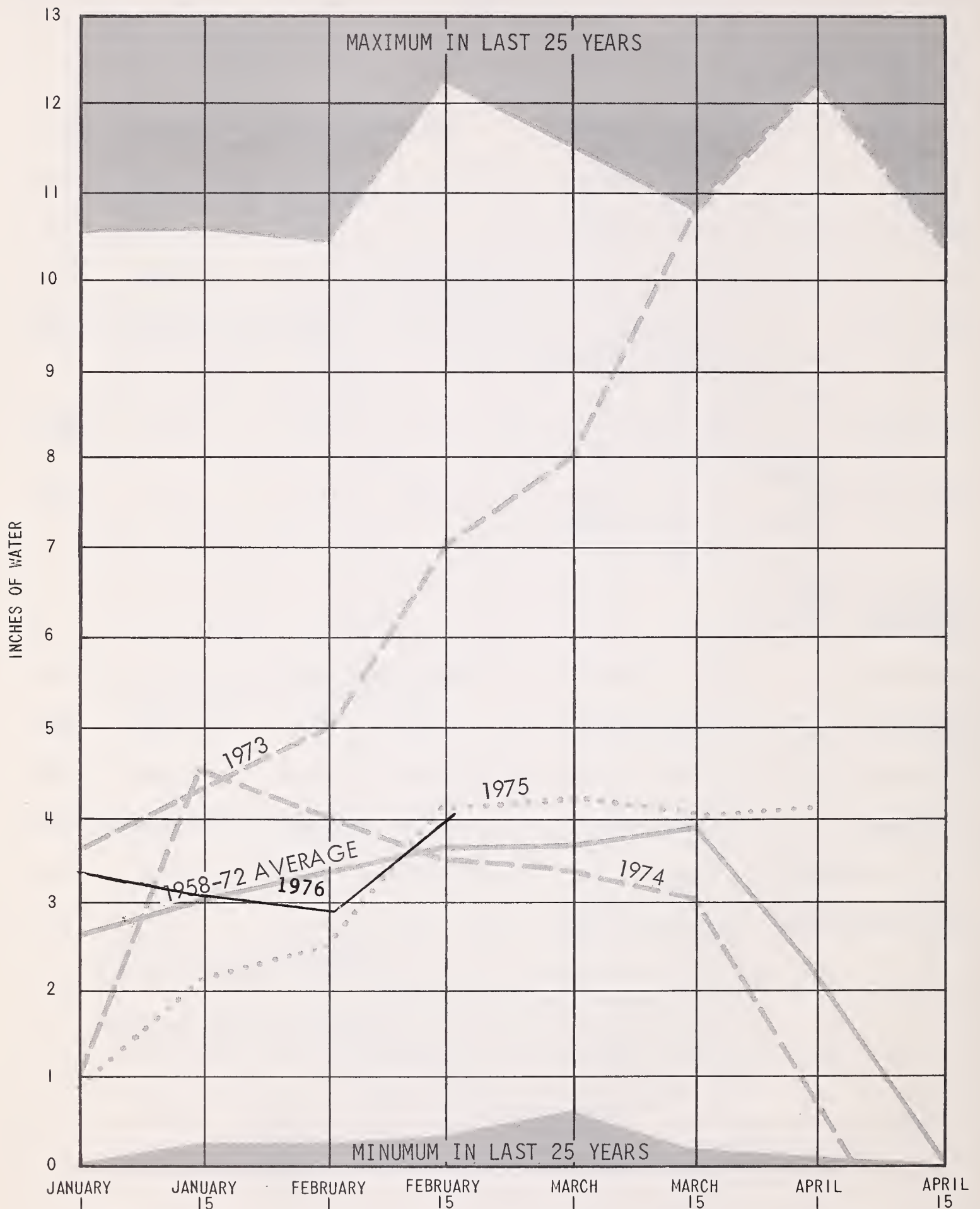
ABOUT FEBRUARY 15, 1976

ABOUT FEBRUARY 15, 1970

BASIN or STREAM	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average†
<u>GILA RIVER DRAINAGE</u>					
Agua Fria	Lake Pleasant	157.6	49.9	56.6	60.5
Granite	Watson Lake	4.7	4.3	1.4	3.0
Granite	Willow Creek	6.1	2.7	1.0	2.6
Gila	San Carlos	1,093	129.6	258.9	181.7
Salt (4)	Roosevelt, Apache, Canyon & Saguaro	1,755	1106.0	1,025	1,099
Verde (2)	Bartlett & Horseshoe	317.7	165.2	49.2	136.2
Salt and Verde	6 Salt River Project Reservoirs	2,073	1271.2	1,074	1,235
<u>COLORADO RIVER DRAINAGE</u>					
Colorado	Lake Havasu	619.4	561.8	543.2	542.2
Colorado	Lake Mohave	1,810	1,698.7	1,618	1,691
Colorado	Lake Mead	26,159	20,412	19,958	17,283
Colorado	Lake Powell	25,002	19,985	17,268	7,289*
Little Colorado	Lyman	30.6	21.1	11.5	13.0
Little Colorado	Show Low Lake	5.1	1.8	0.6	1.7
† Based on 15-year period, 1958-72					
* Average is for less than 15 years of record					

+ 1958-1972 period.

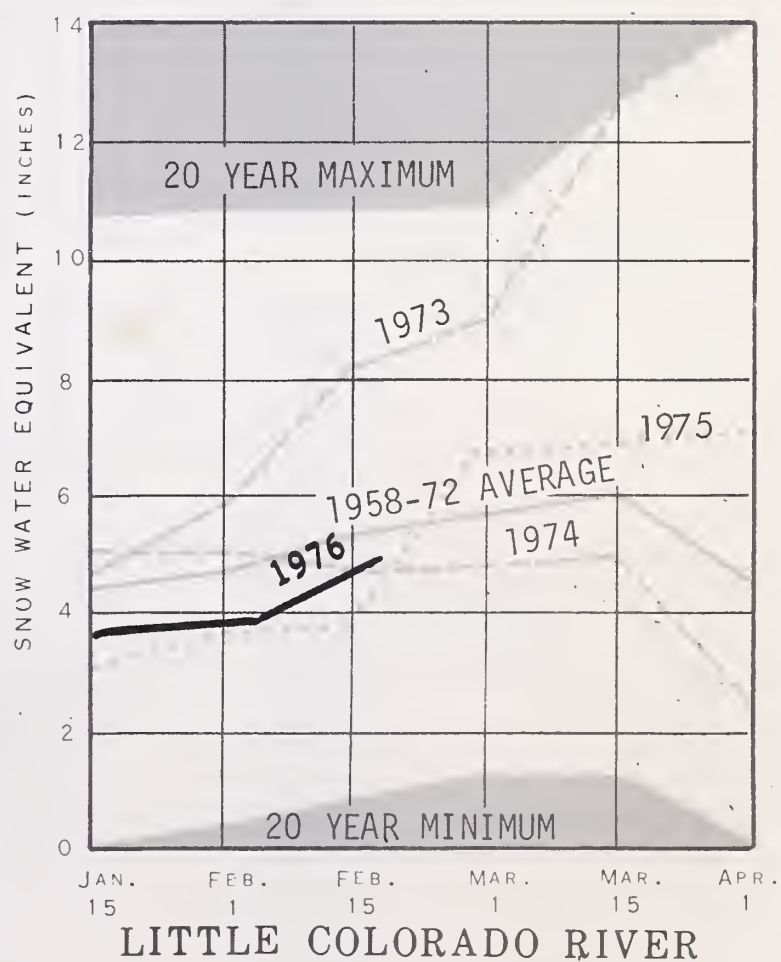
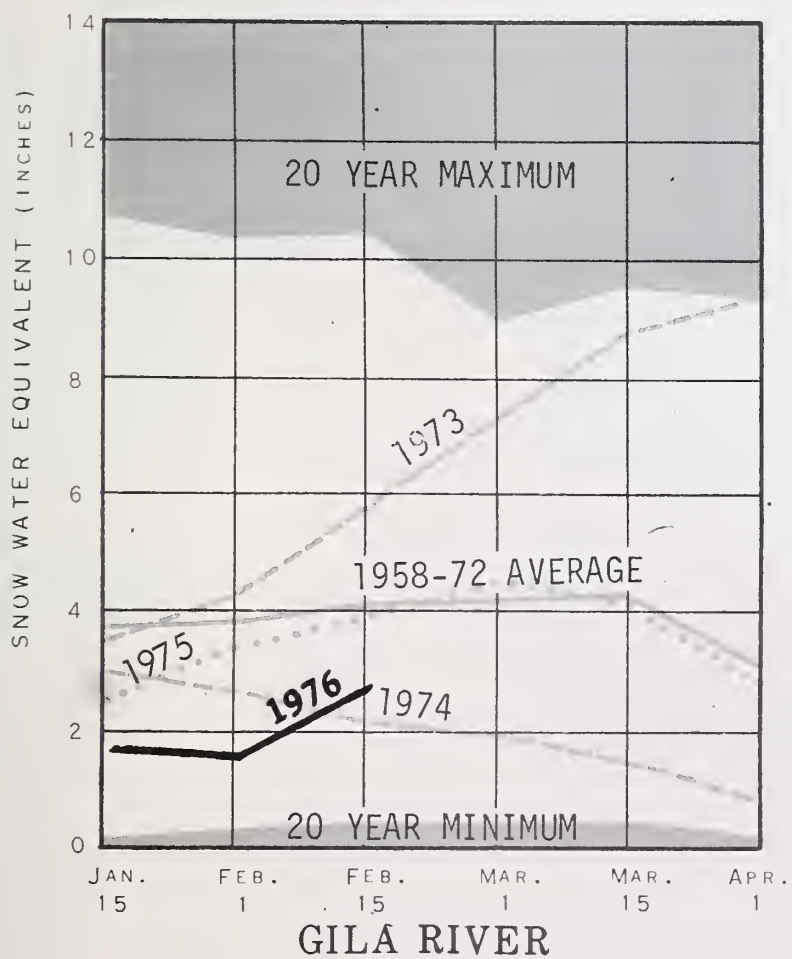
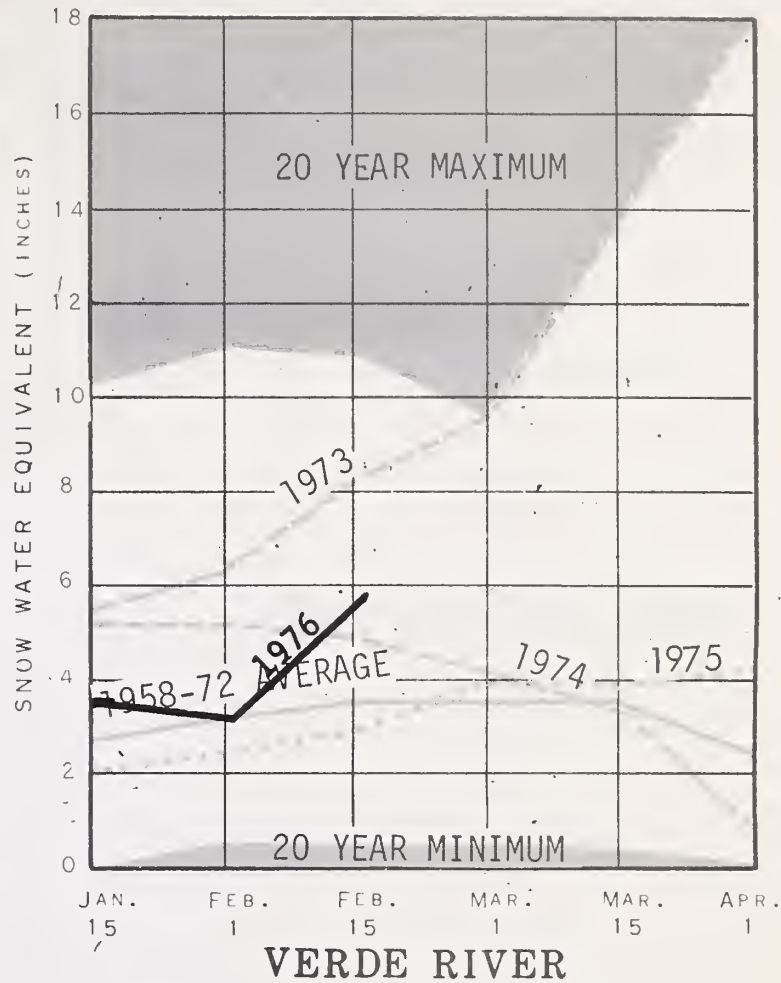
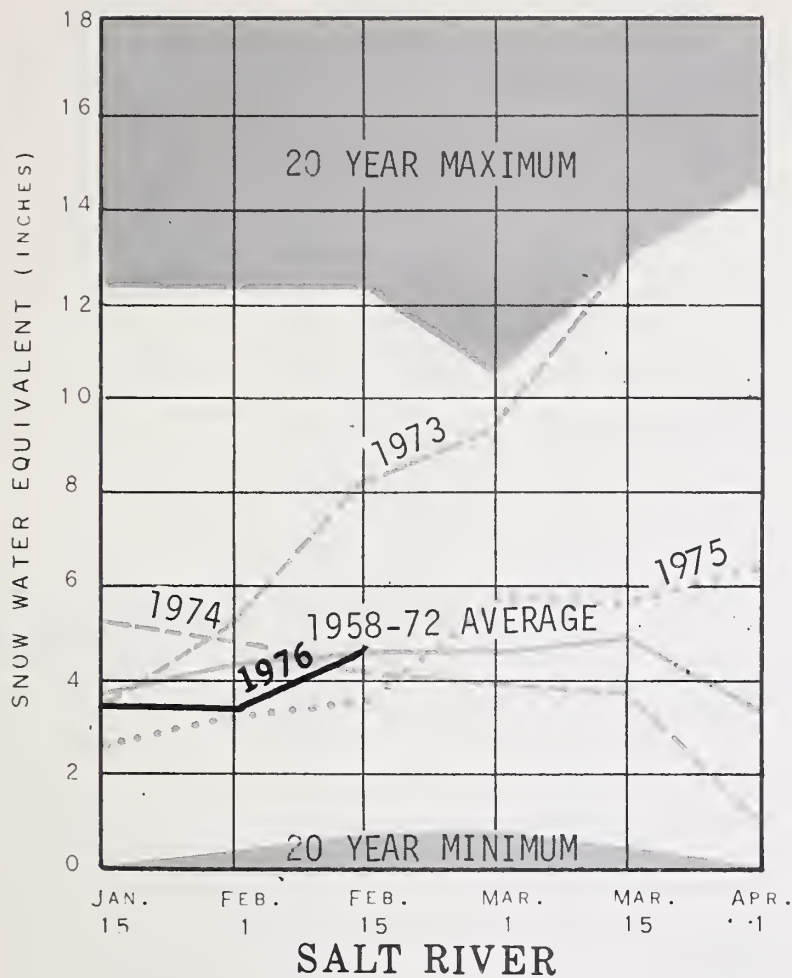
AVERAGE SNOW COVER ARIZONA 1976



This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.

1976

WATERSHED SNOW COVER



BASED ON SELECTED SNOW SURVEY COURSES

WATER SUPPLY INVENTORY SALT RIVER VALLEY SYSTEM

IN ACRE-FEET
FEBRUARY 15, 1976

3,000,000

AVERAGE SUPPLY
ON FEBRUARY 15

ANTICIPATED 1976 SUPPLY *

2,500,000

2,000,000

Average Spring
Runoff

1,500,000

Average Summer
Runoff

1,000,000

Average
Storage

500,000

0

Forecast Runoff
(February 15-May)

Average Summer
Runoff

Present
Storage

Based on Present Storage + Forecast Spring Runoff + Average Summer Runoff



SNOW

ABOUT FEBRUARY 15, 1976

SNOW		THIS YEAR			PAST RECORD	
DRAINAGE BASIN and or SNOW COURSE		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
<u>GILA RIVER</u>						
Bear Wallow	8100	2/13	5	2.2	1.3	4.7
Beaver Head	8000	2/13	5	1.2	2.5	3.2
Coronado Trail	8000	2/13	1	0.2	2.2	2.8
Emory Pass #1 *	7800	2/13	0	0.0	0.0	0.2**
Emory Pass #2 *	7800	2/13	0	0.0	1.4	1.0**
Frisco Divide	8000	2/12	6	1.7	2.4	2.4
Hannagan Meadows *	9090	2/13	30	7.5	6.6	8.0**
Hummingbird (A)	10550	2/13	48	12.5	12.3	12.4**
McKnight Cabin * (A)	9300	2/13	4	1.2	4.0	3.5**
Mogollon	7000	2/14	0	0.0	0.5	1.9
Nutrioso	8500	2/13	4	1.1	1.9	1.9
Redstone Trail	8600	2/14	18	5.9	7.1	7.2**
Rose Canyon	7300	2/13	0	0.0	0.4	3.2
Silver Creek Divide	9000	2/14	28	8.8	9.8	10.7**
State Line	8000	2/12	5	1.8	2.1	2.5
Whitewater (A)	10750	2/13	65	16.3	15.0	14.9**
<u>VERDE RIVER</u>						
Baker Butte	7300	2/13	24	9.6	4.4	5.7**
Baker Butte #2	7700	2/13	44	17.6	7.7	---
Camp Wood	5700	2/13	0	0.0	0.1	0.5
Chalender *	7100	2/13	13	4.1	1.6	2.5
Copper Basin Divide	6720	2/13	5	1.6	0.4	2.0**
Fort Valley	7350	2/13	5	1.6	2.4	2.0
Gaddes Canyon	7600	2/14	22	6.9	2.5	4.2
Happy Jack	7630	2/13	13	4.9	2.4	3.1
Iron Springs *	6200	2/13	0	0.0	0.0	0.6
Mingus Mountain	7100	2/14	0	0.0	0.0	1.2
Mormon Lake *	7350	2/13	23	7.8	4.0	3.0
Mormon Mountain	7500	2/13	25	9.3	4.0	3.8
Newman Park	6750	2/17	6	3.0	2.7	1.8**
Snow Bowl #1	10260	2/13	36	9.6	7.6	8.1**
Snow Bowl #2	11000	2/13	59	15.1	11.6	14.0**
White Horse Lake Jct.	7150	2/13	14	5.4	2.6	2.6**
White Spar	6000	2/13	0	0.0	0.0	0.7**
<u>LOWER COLORADO RIVER</u>						
Bill Williams Intermediate	8550	2/13	37	12.7	5.0	6.5**
Bill Williams Summit	8950	2/13	48	15.1	6.9	9.1**
Chalender *	7100	2/13	13	4.1	1.6	2.5
Fort Valley	7350	2/13	5	1.6	2.4	2.0
Grand Canyon	7500	2/13	4	0.8	1.4	1.6
Williams Ski Run	7720	2/13	32	11.5	5.7	5.5**
Bright Angel	8400	2/14	30	7.7	---	---
† 1958-72 15-year period. (*) Adjacent drainage. (**) 1958-72 Adjusted Average. (A) Aerial observation: Water content estimated.						

SNOW

ABOUT FEBRUARY 15, 1976

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average †
<u>SALT RIVER</u>						
Baldy *	9125	2/13	26	7.7	5.0	6.2
Beaver Head	8000	2/13	5	1.2	2.5	3.2
Canyon Creek	7500	2/13	13	4.6	2.2	2.8
Canyon Point	7600	2/13	13	5.2	3.1	3.0**
Coronado Trail	8000	2/13	1	0.2	2.2	2.8
Forest Dale	6430	2/13	0	0.0	0.4	1.1
Ft. Apache	9160	2/13	24	7.6	6.6	6.7
Hannagan Meadows	9090	2/13	30	7.5	6.6	8.0**
Hawley Lake	8300	2/13	24	7.1	5.4	5.4**
Heber	7600	2/13	12	4.4	2.3	3.2
Maverick Fork	9050	2/13	34	9.4	6.0	7.4
McNary	7200	2/13	4	1.2	1.2	2.6
Milk Ranch	7000	2/13	0	0.0	0.6	1.7
Mt. Ord (A)	11000	N O	S U R V E Y		---	19.0**
Nutrioso *	8500	2/13	4	1.1	1.9	1.9
Promontory Butte	7930	2/13	42	14.5	7.7	---
Smith Cienega (A)	9850	N O	S U R V E Y		---	---
Sunrise Summit	10600	2/14	47	13.5	9.2	---
Wilson Lake	9000	2/12	30	7.8	6.6	9.2**
Workman Creek	6900	2/10	19	7.3	2.8	5.2
<u>LITTLE COLORADO RIVER</u>						
Baldy	9125	2/13	26	7.7	5.0	6.2
Canyon Creek	7500	2/13	13	4.6	2.2	2.8
Canyon Point	7600	2/13	13	5.2	3.1	3.0**
Cheese Springs	8600	2/12	21	5.7	4.3	7.1**
Forest Dale	6430	2/13	0	0.0	0.4	1.1
Ft. Apache	9160	2/13	24	7.6	6.6	6.7
Fort Valley	7350	2/13	5	1.6	2.4	2.0
Happy Jack *	7630	2/13	13	4.9	2.4	3.1
Heber	7600	2/13	12	4.4	2.3	3.2
Lake Mary	6970	2/13	17	6.5	---	---
McNary	7200	2/13	4	1.2	1.2	2.6
Mormon Lake	7350	2/13	23	7.8	4.0	3.0
Mormon Mountain	7500	2/13	25	9.3	4.0	3.8
Nutrioso *	8500	2/13	4	1.1	1.9	1.9
Promontory Butte	7930	2/13	42	14.5	7.7	---
Snow Bowl #1	10260	2/13	36	9.6	7.6	8.1**
Snow Bowl #2	11000	2/13	59	15.1	11.6	14.0**
Wilson Lake	9000	2/12	30	7.8	6.6	9.2**

† 1958-72 15-year period. (*) Adjacent drainage. (**) 1958-72 Adjusted Average. (A) Aerial observation: Water content estimated.

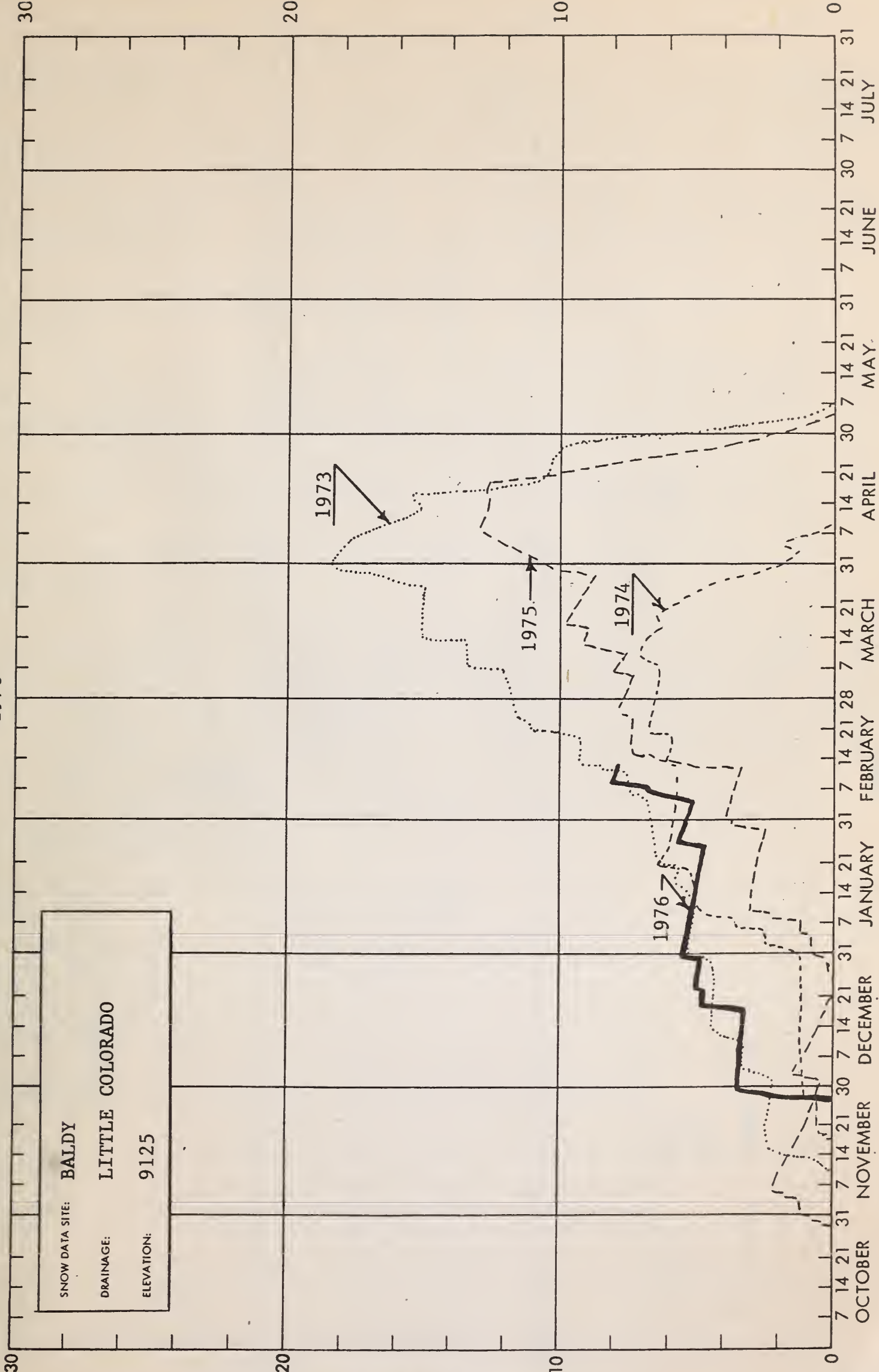
SNOW PILLOW DATA

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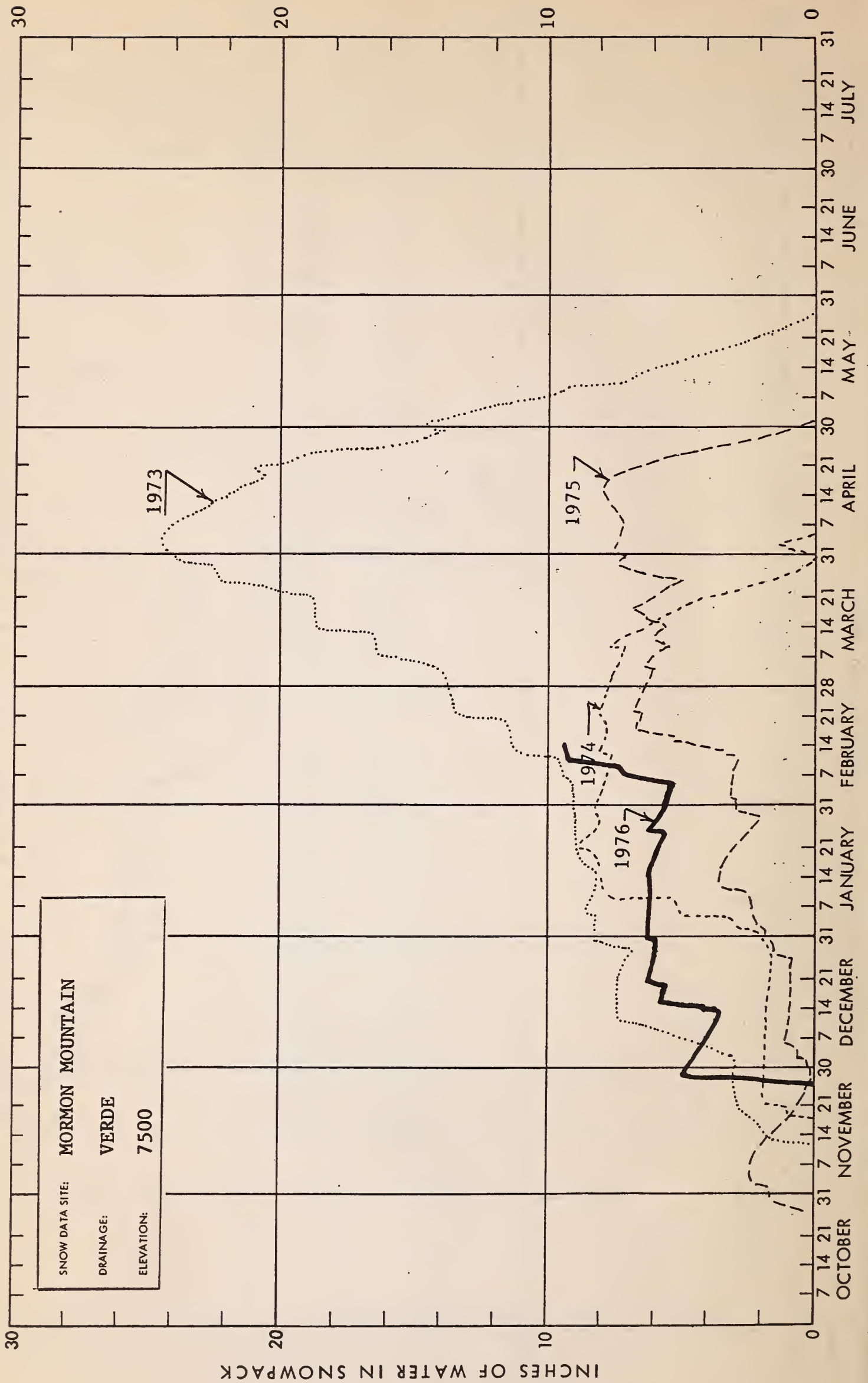
1976

SNOW DATA SITE: **BALDY**
 DRAINAGE: **LITTLE COLORADO**
 ELEVATION: **9125**

INCHES OF WATER IN SNOWPACK



1976



PRECIPITATION (Inches)

ABOUT FEBRUARY 15, 1976

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION			FROM APPROX. NOV. 1 TO DATE		
		Date of Reading	Month's Precipitation	Average †	This Year	Average †	Percent of Average
<u>GILA RIVER</u>							
Silver Creek Divide	9000	2/14	4.50	1.08*	9.75	10.74*	91
Hannagan Meadows **	9030	2/13	3.70	1.04	8.60	9.54	90
Frisco Divide **	8000	2/13	2.75	---	5.29	---	--
<u>SALT RIVER</u>							
Canyon Point	7600	2/13	7.58	1.26*	14.86	12.24*	121
Hannagan Meadows **	9030	2/13	3.70	1.04	8.60	9.54	90
Little Wildcat (Heber Snow Course)	7600	2/13	6.85	1.08	14.31	10.42	137
Maverick Fork	9050	2/13	4.28	1.03	10.81	8.98	120
Workman Creek **	6970	2/10	7.90	1.41	15.67	12.87	122
Wilson Lake	9100	2/12	2.50	1.15*	8.99	9.33*	96
<u>VERDE RIVER</u>							
Baker Butte	7300	2/13	10.04	1.43*	16.19	12.52*	129
Copper Basin Divide	6720	2/13	6.60	1.15*	11.37	7.93*	143
Fort Valley **	7350	2/13	3.54	.80	6.69	6.22	107
Happy Jack **	7480	2/13	5.30	1.11	9.75	7.99	122
Mingus Mountain	7660	2/14	5.70	1.15	10.22	6.71	152
Mormon Mountain	7500	2/13	7.65	1.49*	15.99	11.66*	137
White Horse Lake Jct.**	7150	2/13	7.70	---	12.44	---	---
<u>LITTLE COLORADO</u>							
Inner Basin #1	9830	NO SURVEY		1.32	---	11.51	---
Inner Basin #2	10050	NO SURVEY		1.41*	---	13.26*	---
Greer Lakes	8500	2/13	1.75	.84	4.45	5.14	87
Little Wildcat (Heber Snow Course)	7600	2/13	6.85	1.08	14.31	10.42	137
Sheep Crossing (Baldy Snow Course)	9125	2/13	3.30	.96	8.70	8.71	100
† 1958-72 Average ** Adjusted Average ** Data Supplied by U.S. Forest Service							

PRECIPITATION AT SELECTED ARIZONA STATIONS 1/

STATION	Precipitation (Inches)	
	MONTH: JANUARY	PERIOD: NOVEMBER THROUGH JANUARY
Alpine	.20	2.02
Douglas	.18	.85
Flagstaff WSO*	.17	5.08
McNary	.86	4.89
Payson Ranger Station	.28	4.67
Phoenix WSFO**	T	1.67
Pleasant Valley	.26	2.68
Prescott (City)	.28	3.50
Sierra Ancha	.30	6.72
Springerville	.01	.68
Tonto Fish Hatchery	.32	5.37
Tucson WSO*	.06	.93
Winslow WSO*	.09	1.14
Yuma WSO*	.03	.50

1/ Data furnished by the Laboratory of Climatology, ASU, Tempe,
 Arizona, and National Weather Service, Phoenix, Arizona
 WSO* Weather Service Office
 WSFO** Weather Service Forecast Office

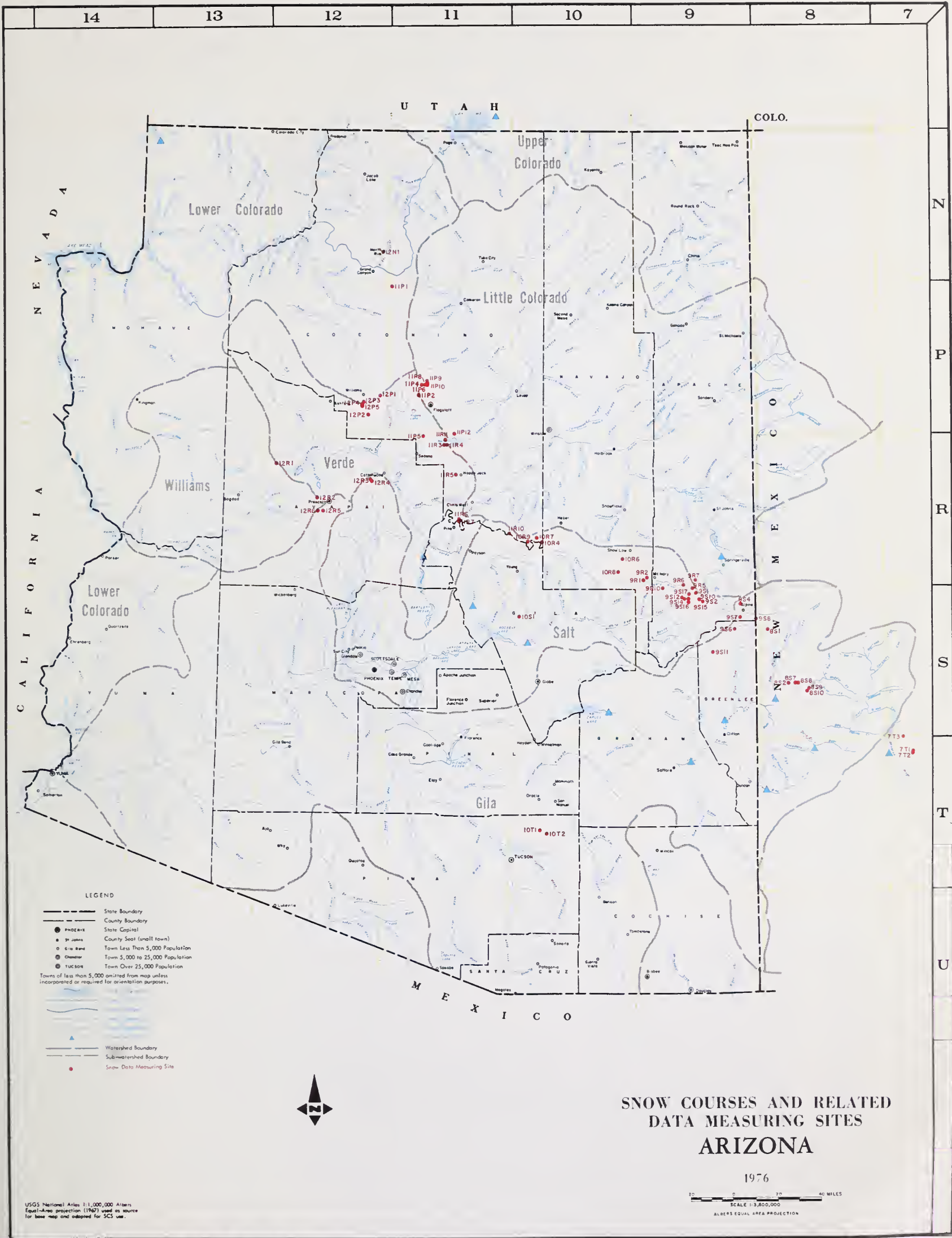
SOIL MOISTURE

ABOUT FEBRUARY 15, 1976

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †
<u>GILA RIVER</u>							
Frisko Divide	8000	48	13.3	2/13	10.8	11.5	10.0
<u>SALT RIVER</u>							
Black River Divide	9100	48	16.8	2/13	16.9	17.7	16.4
Canyon Creek	7500	48	18.3	2/13	18.1	16.9	16.0
Corduroy Creek	6000	36	13.5	2/13	9.0	9.1	9.4
McNary	7200	48	16.3	2/13	17.9	17.9	15.2
<u>VERDE RIVER</u>							
Mormon Mountain	7500	48	16.1	2/13	16.5	14.4	15.9
Newman Park	6750	48	17.7	2/13	16.2	16.2	17.3
† 1958-72 15-year Average							

+ 1958-1972 period.





INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

NUMBER	NAME	SEC.	TWP.	RGE.	ELEV.	DRAINAGE	OBSERVER	RECORD BEGAN
11P10A	Agassiz	32	23N	7E	11200	Little Colorado	SCS-CF *	1968
11R7	Baker Butte #2	9	12N	9E	7700	Verde	SCS	1971
11R6PSP	Baker Butte	4	12N	9E	7300	Verde	SCS	1966
9S1APSP	Baldy	28	7N	27E	9125	Little Colorado	SCS	1950
9S15	Baldy #2	12	6N	26E	9750	Little Colorado	SCS	1963
9S16	Baldy #3	13	6N	26E	10950	Little Colorado	SCS	1963
10T1	Bear Wallow	6	12S	16E	8100	Gila	FS	1948
9S6	Beaver Head	13	4N	30E	8000	San Francisco	FS	1938
12P5	Bill Williams Intermediate	17	21N	2E	8550	Cataract	FS	1967
12P4	Bill Williams Summit	17	21N	2E	8950	Verde	FS	1967
9S10m	Black River Divide	10	6N	27E	9400	Salt	SCS	1954
12N1	Bright Angel	34	33N	3E	8400	Bright Angel Creek	NPS	1947
12R1	Camp Wood	3	16N	6W	5700	Verde	FS	1946
10R7M	Canyon Creek #2	18	11N	15E	7500	Little Colorado	SCS	1958
10R9P	Canyon Point	28	11N	14E	7600	Salt	SCS	1967
12P1M	Chalender	27	22N	3E	7100	Verde	FS	1947
9R7	Cheese Springs	28	8N	27E	8600	Little Colorado	SCS	1969
12R6P	Copper Basin Divide	23	13N	3W	6720	Verde	SCS	1963
10R8m	Corduoy Creek	4	8N	21E	6000	Salt	SCS	1954
9S7	Coronado Trail	26	5N	30E	8000	San Francisco	FS	1938
7T1	Emory Pass #1	16	16S	9W**	7800	Mimbres	SCS	1967
7T2	Emory Pass #2	16	16S	9W**	7800	Mimbres	SCS	1967
10R6	Forest Dale	2	9N	21E	6430	Salt	BIA	1939
9R5	Ft. Apache	18	7N	27E	9160	Little Colorado	SCS	1951
11P2P	Ft. Valley	22	22N	6E	7350	Little Colorado	FS	1947
8S1MP	Frisco Divide	31	6S	20W**	8000	San Francisco	FS	1938
12R4	Gaddes Canyon	11	15N	2E	7600	Verde	SCS	1954
11P1	Grand Canyon	21	30N	4E	7500	Hance Creek	NPS	1947
9S11P	Hannagan Meadows	19	3N	29E	9090	San Francisco	FS	1964
11R5P	Happy Jack	30	16N	9E	7630	Verde	FS	1951
9R10	Hawley Lake	13	7N	24E	8300	Salt	BIA	1966
10R4PSP	Heber	28	11N	15E	7600	Little Colorado	SCS	1950
8S9A	Hummingbird	19	11S	17W**	10550	Gila	SCS	1964
11P9P	Inner Basin #1	28	23N	7E	10000	Little Colorado	SCS	1967
11P8P	Inner Basin #2	28	23N	7E	9750	Little Colorado	SCS	1967
12R2	Iron Springs	22	14N	3W	6200	Little Colorado	SCS	1946
11P12	Lake Mary	21	19N	9E	6930	Little Colorado	SCS	1975
9S2APSP	Maverick Fork	13	6N	27E	9150	Salt	SCS	1950
7S3A	McKnight Cabin	10	15S	10W**	9300	Mimbres	SCS	1967
9R2M	McNary	23	8N	23E	7200	Salt	BIA	1939
9R1	Milk Ranch	33	8N	23E	7000	Salt	BIA	1941
12R3	Mingus Mountain	3	15N	2E	7100	Verde	SCS	1947
8S2	Mogollon	2	11S	19W**	7000	San Francisco	SCS	1953
11R4	Mormon Lake	13	18N	8E	7350	Little Colorado	SCS	1947
11R3MAPSP	Mormon Mountain	14	18N	8E	7500	Verde	SCS	1950
11R11	Mormon Mountain Summit	2	18N	8E	8470	Little Colorado	SCS	1975
9S12A	Mt. Ord	4	6N	26E	11200	Salt	SRP-SCS	1966
11P5M	Newman Park	25	19N	6E	6750	Verde	SCS	1963
9S4	Nutriso	23	6N	30E	8500	San Francisco	FS	1938
11R10	Promotory Butte	5	11N	13E	7930	Little Colorado	SCS	1973
8S7	Redstone Trail	5	11S	18W**	8600	San Francisco	SCS	1961
10T2	Rose Canyon	15	12S	16E	7300	Gila	FS	1948
8S8PSP	Silver Creek Divide	4	11S	18W**	9000	San Francisco	SCS	1964
9S14A	Smith Cienega	10	6N	26E	10050	Salt	SRP-SCS	1966
11P4	Snow Bowl #1	36	23N	6E	10260	Verde	FS	1961
11P6	Snow Bowl #2	31	23N	7E	11000	Verde	FS	1965
9S8	State Line	6	6S	21W**	8000	San Francisco	FS	1938
9S17	Sunrise Summit	36	7N	26E	10600	Salt	SCS	1972
12P2P	White Horse Lake Jct.	2	20N	2E	7180	Verde	FS	1967
12R5	White Spar	19	13N	2W	6000	Verde	SCS	1963
8S10A	Whitewater	19	11S	17W**	10750	Gila	SCS	1964
12P3	Williams Ski Run	9	21N	2E	7720	Cataract	FS	1967
9R6P	Wilson Lake	4	7N	26E	9000	Salt	SCS	1966
10S1P	Workman Creek	33	6N	14E	6900	Salt	FS	1952

A Aerial Snow Depth Marker

a Aerial Snow Depth Marker Only

M Soil Moisture Station

m Soil Moisture Station Only

P Precipitation Storage Gage

SP Snow Pressure Pillow

** NM Principal Meridian

* City of Flagstaff

The Following Organizations Cooperate in the Arizona Snow Survey Work

FEDERAL

- Department of Agriculture
 - Soil Conservation Service
 - Forest Service
 - Apache Forest
 - Coconino Forest
 - Coronado Forest
 - Gila Forest
 - Kaibab Forest
 - Prescott Forest
 - Rocky Mountain Forest and Range Experiment Station
 - Tonto Forest
- Department of Commerce
 - NOAA, National Weather Service
- Department of Interior
 - Bureau of Reclamation
 - Region 111
 - Geological Survey
 - Arizona District
 - New Mexico District
 - Bureau of Indian Affairs
 - Fort Apache Reservation
 - San Carlos Irrigation Project
 - National Park Service
 - Grand Canyon National Park
- Gila Water Commissioner
 - Safford, Arizona

STATE

- Arizona Game and Fish Department
- Arizona State Parks Board
- Arizona Water Commission
- University of Arizona
 - Arizona Agricultural Experiment Station
 - Water Resource Research Center
 - Department of Watershed Management

MUNICIPAL

- City of Flagstaff

IRRIGATION PROJECTS

- Salt River Valley Water User's Association
 - Phoenix, Arizona
- San Carlos Irrigation and Drainage District
 - Coolidge, Arizona
- Maricopa County Municipal Water Conservation District

PRIVATE

- Southwest Forest Industries, Inc.
 - McNary, Arizona
- Fort Apache Indian Reservation
 - White Mountain Recreation Enterprises

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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